

I CLAIM:

Sub A1

membrane tank wall

1. A support arrangement for a semi-membrane tank wall comprising:
an array of support members disposed adjacent to the semi-membrane tank wall;
a plurality of support assemblies connecting to the support members to the semi-membrane tank wall and providing support for the tank wall in the vertical direction while permitting relative sliding motion therebetween in at least one horizontal direction;
each support assembly including a first component affixed to a tank wall, a second component member affixed to support member, and a support structure connecting the first and second components and permitting relative sliding motion between the first and second components in a horizontal direction while providing vertical load support for the adjacent tank wall.

2. A support arrangement according to claim 1 wherein the adjacent tank wall includes an array of stiffeners to which the first components of the support assemblies are affixed.

3. A support arrangement according to claim 1 wherein the support structure comprises a load-bearing component made of thermally insulating material.

4. A support arrangement according to claim 1 wherein the second component of each support assembly comprises a bracket arranged to receive a portion of the support structure in horizontal sliding relation.

5. A support arrangement according to claim 4 wherein the second component substantially encloses the portion of the support structure which is received in sliding relation thereto while permitting relative sliding motion between the first component and the support structure in an orthogonal direction.

6. A support arrangement according to claim 1 wherein the support structure includes a groove permitting sliding motion of the first component in a direction orthogonal to the sliding motion permitted between the structure and the second component and the first component includes an enlarged portion received in the groove of the support structure.

7. A support arrangement according to claim 1 wherein the tank wall is oriented in a horizontal plane and the support assemblies permit relative sliding motion between the support members and the tank wall in two orthogonal horizontal directions.

8. A support arrangement according to claim 1 wherein the tank wall is oriented in a vertical plane and including a further plurality of support assemblies arranged to permit relative sliding motion between the tank wall and the support members in both horizontal and vertical directions.

9. A support arrangement according to claim 8 in which the support assemblies of the further plurality are connected to the tank wall at locations above and below a horizontal center line of the tank.

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